

PTO/SB/05 (03-01)

Approved for use through 10/31/2002. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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**UTILITY
PATENT APPLICATION
TRANSMITTAL**

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.

Y0165-002

First Inventor

Pan, Janet L.

Title

Use of Deep-level Transitions Semiconductor Device

Express Mail Label No.

EV 265498245 US

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17)
(Submit an original and a duplicate for fee processing)
2. ☒ Applicant claims small entity status.
See 37 CFR 1.27.
3. ☒ Specification [Total Pages 75]
(preferred arrangement set forth below)
- Descriptive title of the invention
 - Cross Reference to Related Applications
 - Statement Regarding Fed sponsored R & D
 - Reference to sequence listing, a table, or a computer program listing appendix
 - Background of the Invention
 - Brief Summary of the Invention
 - Brief Description of the Drawings (if filed)
 - Detailed Description
 - Claim(s)
 - Abstract of the Disclosure
4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 16]
5. Oath or Declaration [Total Pages 2]
- a. ☒ Newly executed (original or copy)
- b. ☐ Copy from a prior application (37 CFR 1.63 (d))
(for continuation/divisional with Box 18 completed)
- i. ☐ **DELETION OF INVENTOR(S)**
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6. ☐ Application Data Sheet. See 37 CFR 1.76

ADDRESS TO:Assistant Commissioner for Patents
Box Patent Application
Washington, DC 20231

7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
- a. ☐ Computer Readable Form (CRF)
- b. Specification Sequence Listing on:
- i. ☐ CD-ROM or CD-R (2 copies); or
- ii. ☐ paper
- c. ☐ Statements verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

9. ☐ Assignment Papers (cover sheet & document(s))
10. ☐ 37 CFR 3.73(b) Statement (when there is an assignee) ☐ Power of Attorney
11. ☐ English Translation Document (if applicable)
12. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
13. ☒ Preliminary Amendment
14. ☐ Return Receipt Postcard (MPEP 503) (Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed)
16. ☐ Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.
17. ☐ Other:

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP)

of prior application No.: _____

Prior application Information:

Examiner: _____

Group Art Unit: _____

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

19. CORRESPONDENCE ADDRESS☐ Customer Number or Bar Code Labelor ☐ Correspondence address below

Name

Patterson, Belknap, Webb & Tyler LLP

ATTN: IP Docketing

Address

1133 Avenue of the Americas

City

New York

State

NY

Zip Code

10036

Country

USA

Telephone

212-336-2000

Fax

212-336-2222

Name (Print/Type)

David Garrod

Registration No. (Attorney/Agent)

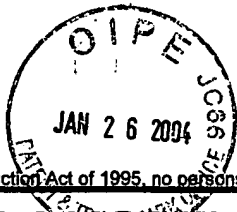
35,149

Signature

Date

09/04/2003

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FEE TRANSMITTAL for FY 2003

Effective 01/01/2003. Patent fees are subject to annual revision.

☒ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$)**375.00**

Complete If Known

Application Number	N/A
Filing Date	Filed Herewith
First Named Inventor	Pan, Janet L.
Examiner Name	N/A
Art Unit	N/A
Attorney Docket No.	Y0165-002

METHOD OF PAYMENT (check all that apply)

☒ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None

☒ Deposit Account:

Deposit Account Number
Deposit Account Name

16-0633

The Commissioner is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☐ Credit any overpayments

☒ Charge any additional fee(s) during the pendency of this application

☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
1001 750	2001 375	Utility filing fee	\$375.00
1002 330	2002 165	Design filing fee	
1003 520	2003 260	Plant filing fee	
1004 750	2004 375	Reissue filing fee	
1005 160	2005 80	Provisional filing fee	

SUBTOTAL (1) (\$)

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

Total Claims **20** -20** = **0** X **0** = **0**
Independent Claims **3** -3** = **0** X **0** = **0**
Multiple Dependent **0** = **0**

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description
1202 18	2202 9	Claims in excess of 20
1201 84	2201 42	Independent claims in excess of 3
1203 280	2203 140	Multiple dependent claim, if not paid
1204 84	2204 42	** Reissue independent claims over original patent
1205 18	2205 9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$)**375.00**

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Small Entity

Fee Code (\$)	Fee Code (\$)	Fee Description	Fee Paid
1051 130	2051 65	Surcharge - late filing fee or oath	
1052 50	2052 25	Surcharge - late provisional filing fee or cover sheet	
1053 130	1053 130	Non-English specification	
1812 2,520	1812 2,520	For filing a request for ex parte reexamination	
1804 920*	1804 920*	Requesting publication of SIR prior to Examiner action	
1805 1,840*	1805 1,840*	Requesting publication of SIR after Examiner action	
1251 110	2251 55	Extension for reply within first month	
1252 410	2252 205	Extension for reply within second month	
1253 930	2253 465	Extension for reply within third month	
1254 1,450	2254 725	Extension for reply within fourth month	
1255 1,970	2255 985	Extension for reply within fifth month	
1401 320	2401 160	Notice of Appeal	
1402 320	2402 160	Filing a brief in support of an appeal	
1403 280	2403 140	Request for oral hearing	
1451 1,510	1451 1,510	Petition to institute a public use proceeding	
1452 110	2452 55	Petition to revive - unavoidable	
1453 1,300	2453 650	Petition to revive - unintentional	
1501 1,300	2501 650	Utility issue fee (or reissue)	
1502 470	2502 235	Design issue fee	
1503 630	2503 315	Plant issue fee	
1460 130	1460 130	Petitions to the Commissioner	
1807 50	1807 50	Processing fee under 37 CFR 1.17(q)	
1806 180	1806 180	Submission of Information Disclosure Stmt	
8021 40	8021 40	Recording each patent assignment per property (times number of properties)	
1809 750	2809 375	Filing a submission after final rejection (37 CFR 1.129(a))	
1810 750	2810 375	For each additional invention to be examined (37 CFR 1.129(b))	
1801 750	2801 375	Request for Continued Examination (RCE)	
1802 900	1802 900	Request for expedited examination of a design application	

Other fee (specify) _____

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SUBTOTAL (3) (\$)

SUBMITTED BY

Name (Print/Type) David Garrod

Registration No. 35,149
(Attorney/Agent)

(Complete if applicable)

Telephone 212-336-2183

Signature

Date September 4, 2003

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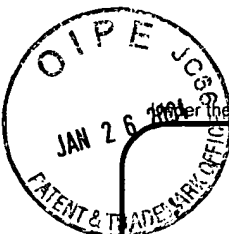
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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number 10,654/790

Filing Date 09/04/2003

First Named Inventor Pan, Janet L.

Group Art Unit N/A

Examiner Name N/A

Total Number of Pages in This Submission

152

Attorney Docket Number Y0165-002

ENCLOSURES (check all that apply)

☒ Fee Transmittal Form

☒ Fee Attached

☐ Amendment / Reply

☐ After Final

☐ Affidavits/declaration(s)

☐ Extension of Time Request

☐ Express Abandonment Request

☐ Information Disclosure Statement

☐ Certified Copy of Priority Document(s)

☒ Response to Missing Parts/
Incomplete Application

☒ Response to Missing Parts
under 37 CFR 1.52 or 1.53

☐ Assignment Papers
(for an Application)

☒ Drawing(s)

☐ Licensing-related Papers

☒ Petition

☐ Petition to Convert to a
Provisional Application

☐ Power of Attorney, Revocation
Change of Correspondence
Address

☐ Terminal Disclaimer

☐ Request for Refund

☐ CD, Number of CD(s) _____

☐ After Allowance Communication
to Group

☐ Appeal Communication to Board
of Appeals and Interferences

☐ Appeal Communication to Group
(Appeal Notice, Brief, Reply Brief)

☐ Proprietary Information

☐ Status Letter

☒ Other Enclosure(s) (please
identify below):

Return Postcard

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm
or
Individual name

David Garrod (Reg. No. 35,149)

Signature

Date

01/26/2004

CERTIFICATE OF MAILING

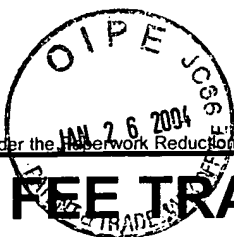
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Typed or printed name

Signature

Date

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PTO/SB/17 (01-03)
Approved for use through 04/30/2003. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

FREE TRANSMITTAL for FY 2003

Effective 01/01/2003. Patent fees are subject to annual revision.

☒ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) \$195.00

Compleat if Known

Application Number	10/654,790
Filing Date	09/04/2003
First Named Inventor	Pan, Janet L.
Examiner Name	N/A
Art Unit	N/A
Attorney Docket No.	Y0165-002

METHOD OF PAYMENT (check all that apply)

☒ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None

☒ Deposit Account:

Deposit Account Number: 16-0633
Deposit Account Name:

The Commissioner is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☐ Credit any overpayments

☒ Charge any additional fee(s) during the pendency of this application

☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

FEE CALCULATION

1. BASIC FILING FEE

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1001	750	2001	375	Utility filing fee	
1002	330	2002	165	Design filing fee	
1003	520	2003	260	Plant filing fee	
1004	750	2004	375	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	

SUBTOTAL (1) (\$)

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

	Extra Claims	Fee from below	Fee Paid
Total Claims	16	-20** =	
Independent Claims	8	-3** =	5
Multiple Dependent			43
			215

Large Entity | Small Entity

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description
1202	18	2202	9	Claims in excess of 20
1201	84	2201	42	Independent claims in excess of 3
1203	280	2203	140	Multiple dependent claim, if not paid
1204	84	2204	42	** Reissue independent claims over original patent
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$)

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity | Small Entity

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	\$65.00
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
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1812	2,520	1812	2,520	For filing a request for <i>ex parte</i> reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
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1252	410	2252	205	Extension for reply within second month	
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1403	280	2403	140	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,300	2453	650	Petition to revive - unintentional	
1501	1,300	2501	650	Utility issue fee (or reissue)	
1502	470	2502	235	Design issue fee	
1503	630	2503	315	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	\$130.00
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
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8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	750	2809	375	Filing a submission after final rejection (37 CFR 1.129(a))	
1810	750	2810	375	For each additional invention to be examined (37 CFR 1.129(b))	
1801	750	2801	375	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify)

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SUBTOTAL (3) (\$) \$130.00

SUBMITTED BY

(Complete (if applicable))

Name (Print/Type)	David Garrod	Registration No. (Attorney/Agent)	35,149	Telephone	212-336-2183
Signature		Date	12/23/2003		

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ATTORNEY DKT NO.: Y0165-002

01-28-04

DAC
AB

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Pan, Janet L.
Group Art Unit: N/A
U.S. Serial No.: 10/654,790
Examiner: N/A
Filed: 09/04/2003
Title: USE OF DEEP-LEVEL TRANSITIONS IN SEMICONDUCTOR DEVICES

Mail Stop: Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

EXPRESS MAIL CERTIFICATE

Express Mail Label No.: EV 779703679 US

Date of Deposit: January 26, 2004

I hereby certify that the following documents:

1. Transmittal Form (1 page);
2. Fee Transmittal Form (2 pages: 1 original and 1 copy);
3. Copy of Notice to File Missing Parts of Nonprovisional Application (2 pages);
4. Declaration for Utility or Design Patent Application (2 pages);
5. Petition to Correct Filing Date and Supporting Exhibits (145 pages);
6. Check # 133844 in the Amount of \$130.00;
7. Check # 133843 in the Amount of \$65.00; and
8. Return postcard

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Respectfully Submitted,

Shannon Travis

Mailing Address:
PATTERSON, BELKNAP, WEBB & TYLER LLP
1133 Avenue of the Americas
New York, NY 10036-6710
Telephone: (212) 336-2000
Facsimile: (212) 336-2222

The PTO did not receive the following
listed item(s) check for \$130.00 and
\$65.00 is not enclosed.



Serial No. N/A Filing Date Filed by email File No. Y0165-002

THE USE OF DEEP-LEVEL TRANSITIONS IN SEMICONDUCTOR DEVICES

Applicant: Janet L. Pan Date: _____

The PTO has received: _____ Last Due Date: _____

☒ Patent Application of 75 _____

Pages (including claims & abstract)

☒ Declaration or ☐ Designation Sheet

☒ Drawings 16 Sheet(s)/Figs. 1 to 16

☐ Priority Document

☐ Small Entity Declaration

☐ Assignment & Conveyance Cover Sheet

☐ Information Disclosure Statement

☐ PTO-1449

☒ Amendment

☐ Affidavit or Declaration

☐

☐ TM Application ☐ ITU Basis

☐ Statement of Use

☐ Extension of Time

☐ Notice of Appeal

☐ Brief

☐ Petition

☐ Status Request

☐ Issue Fee

☐ Affidavit of Use

☐ Renewal

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☒ Check No. 50492 for \$ 375.00

DK/ST